What is claimed is:

1. An image data processing device comprising:

an interpreter portion obtaining page description language data that includes image data of a source image and image-size specifying data of both the source image and a device image, the interpreter portion generating intermediate data based on the image data of the source image and the image-size specifying data; and

a rasterize portion generating image data of the device image in an output memory based on the intermediate data,

wherein, if the image-size specifying data specifies enlargement from the size of the source image to the size of the device image, the interpreter portion generates the intermediate data that includes intermediate image data and enlargement ratio data, the intermediate image data being the same data as the image data of the source image, the enlargement ratio data specifying enlargement ratios from the size of the source image to the size of the device image.

2. The image data processing device as claimed in claim 1, wherein, if the image-size specifying data specifies reduction from the size of the source image to the size of the device image, the interpreter portion reduces the size of the source image to the size of the device image based on the image-size specifying data and generates the

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intermediate data that includes the intermediate image data and the enlargement ratio data, the intermediate image data being the image data of the reduced size source image, the enlargement ratio data specifying enlargement ratios maintaining the size of the reduced size source image.

3. The image data processing device as claimed in claim 2, wherein, if the page description language data includes clip specifying data that specifies clipping of a specified portion of the device image, the interpreter portion generates the intermediate data including the image data of a corresponding portion of the source image, the corresponding portion of the source image corresponding to the specified portion of the device image.

4. The image data processing device as claimed in claim 2, wherein the source image includes multiple pixels that are arranged in a form of a matrix having rows and columns;

wherein the intermediate image data includes image data of multiple pixels that are arranged in a form of a matrix having rows and columns;

wherein the interpreter portion generates the intermediate data that includes the enlargement ratio data based on the image-size specifying data of both the source image and the device image, the enlargement ratio data including an expansion multiplier for each row and an

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expansion multiplier for each column; and

wherein the rasterize portion expands each pixel of the intermediate image data based on the expansion multiplier for each row and the expansion multiplier for each column, thereby generating the image data of the device image.

5. The image data processing device as claimed in claim 2, wherein the interpreter portion includes a determination portion determining whether to convert a pixel format when generating the intermediate image data from the image data of the source image;

wherein, if the determination portion has determined that the pixel format is to be converted to a predetermined format that is required by the rasterize portion, the interpreter portion converts the pixel format to the predetermined format and changes the intermediate data to include pixel-format instruction data instructing the rasterize portion that the conversion of the pixel format has already been performed;

wherein, if the determination portion has determined that the pixel format is not to be converted, the interpreter portion changes the intermediate data to include the pixel-format instruction data instructing the rasterize portion to convert the pixel format to the predetermined format; and

wherein the rasterize portion converts the pixel
format of the intermediate image data to the predetermined
format depending on the instruction of the pixel-format
instruction data, thereby generating the image data of the
5   device image in the predetermined format.

6. The image data processing device as claimed in
claim 1, wherein, if the page description language data
includes clip specifying data that specifies clipping of a
specified portion of the device image, the interpreter
10   portion generates the intermediate data including the image
data of a corresponding portion of the source image, the
corresponding portion of the source image corresponding to
the specified portion of the device image.

7. The image data processing device as claimed in
15   claim 1, wherein, if the device image includes both an
inside portion that is inside a device page area and an
outside portion that is outside the device page area, the
interpreter portion generates the intermediate data
including image data of an inside portion of the source
20   image, the inside portion of the source image corresponding
to the inside portion of the device image.

8. The image data processing device as claimed in
claim 1, wherein the source image includes multiple pixels
that are arranged in a form of a matrix having rows and
25   columns;

wherein the intermediate image data includes image data of multiple pixels that are arranged in a form of a matrix having rows and columns;

wherein the interpreter portion generates the
5   intermediate data that includes the enlargement ratio data based on the image-size specifying data of both the source image and the device image, the enlargement ratio data including an expansion multiplier for each row and an expansion multiplier for each column; and

10   wherein the rasterize portion expands each pixel of the intermediate image data based on the expansion multiplier for each row and the expansion multiplier for each column, thereby generating the image data of the device image.

15   9. The image data processing device as claimed in claim 1, wherein the interpreter portion includes a determination portion determining whether to convert a pixel format when generating the intermediate image data from the image data of the source image;

20   wherein, if the determination portion has determined that the pixel format is to be converted to a predetermined format that is required by the rasterize portion, the interpreter portion converts the pixel format to the predetermined format and changes the intermediate data to
25   include pixel-format instruction data instructing the

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rasterize portion that the conversion of the pixel format has already been performed;

wherein, if the determination portion has determined that the pixel format is not to be converted, the interpreter portion changes the intermediate data to include the pixel-format instruction data instructing the rasterize portion to convert the pixel format to the predetermined format; and

wherein the rasterize portion converts the pixel format of the intermediate image data to the predetermined format depending on the instruction of the pixel-format instruction data, thereby generating the image data of the device image in the predetermined format.

10. The image data processing device as claimed in claim 9, wherein the conversion of the pixel format represents conversion of a number of bits for representing pixels to a predetermined number of bits.

11. The image data processing device as claimed in claim 9, wherein the conversion of the pixel format represents conversion from index values of a color palette to corresponding data for direct color.

12. The image data processing device as claimed in claim 9, wherein the determination portion determines whether to perform the conversion of the pixel format, depending on whether the size of the source image is greater

than or equal to a predetermined size.

13. The image data processing device as claimed in claim 9, wherein the interpreter portion further includes a memory for storing the intermediate data; and

5   wherein the determination portion determines whether to perform the conversion of the pixel format depending on a free amount of the memory.

14. An image forming apparatus comprising:

an image data processing device including:

10   an interpreter portion obtaining page description language data that includes image data of a source image and image-size specifying data of both the source image and a device image, the interpreter portion generating intermediate data based on the image data of the

15   source image and the image-size specifying data; and

a rasterize portion generating image data of the device image in an output memory based on the intermediate data,

wherein, if the image-size specifying data

20   specifies enlargement from the size of the source image to the size of the device image, the interpreter portion generates the intermediate data that includes intermediate image data and enlargement ratio data, the intermediate image data being the same data as the image data of the

25   source image, the enlargement ratio data specifying

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enlargement ratios from the size of the source image to the size of the device image; and

a printing device printing, on a medium, the device image in accordance with the image data of the device image.

5   15. The image forming apparatus as claimed in claim 14, wherein, if the image-size specifying data specifies reduction from the size of the source image to the size of the device image, the interpreter portion reduces the size of the source image to the size of the device image based on the image-size specifying data and generates the intermediate data that includes the intermediate image data and the enlargement ratio data, the intermediate image data being the image data of the reduced size source image, the enlargement ratio data specifying enlargement ratios maintaining the size of the reduced size source image.